

Federal Operating Permit  
Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Solite, LLC
Facility Name:	Solite, LLC
Facility Location:	State Route 652, 1 mile west of Route 15 Arvonnia, Virginia
Registration Number:	30200
Permit Number	SCRO-30200

December 3, 2006  
Effective Date

December 2, 2011  
Expiration Date

\_\_\_\_\_  
Regional Director

DRAFT  
Signature Date

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## **I. Facility Information**

### **Permittee**

Solite, LLC  
P.O. Box 68  
Arvonion, VA 23004

### **Responsible Official**

Kirk Edens  
President

### **Facility**

Solite, LLC  
State Route 652, 1 mile west of Route 15  
Arvonion, VA 23004

### **Contact Person**

Scott Roman  
Coordinator, Environmental Affairs  
(434) 581-3328

**County-Plant Identification Number:** 51-029-0005

**Facility Description:** NAICS Code 327992 – Lightweight Aggregate Manufacturing

Facility quarries shale/slate on-site and may also receive shale/slate from off-site. Raw materials are crushed and may be sold; however, most of the raw material is heated in rotary kilns which expand the shale/slate into light-weight aggregate clinker. Fuel for the kilns is primarily hazardous waste fuel but may also be natural gas, residual oil, distillate oil, or any combination of these fuels.

Should the permittee elect to operate the kilns without firing hazardous waste, the source is exempt from requirements of Section X of this permit [Hazardous Waste Combustors], provided that: (1) The hazardous waste residence time has expired; and (2) the source establishes this mode of operation under Sec. 63.1209(q) and notes in the operating record when it enters and leaves this mode of operation.

Giant Resource Recovery - Arvonion, Inc. (GRR), the hazardous waste fuel provider, is located adjacent to Solite. For Title V permitting purposes, GRR and Solite are considered to be a single source. Despite their single source status with respect to air permitting, the plants have separate daily operations and responsibilities. At the request of the plant owners, the Title V permit was split so that each plant has the portion of the permit containing requirements applicable to its operation. In order to clarify the single source status for the facility, DEQ retained one source registration number while issuing 2 permit documents, each containing requirements for one plant and cross referencing requirements for the other. General provisions apply to each plant and are therefore contained in both documents.

## II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Fuel Burning Equipment (Kilns)</b>							
K7	BH 7,8	Kennedy Van Saun rotary kiln (1961)	57 MM Btu/hr; 16 ton/hr	fabric filter	BH7, BH8	PM and PM HAPs	
K8	BH 7,8	Kennedy Van Saun rotary kiln (1966)	64 MM Btu/hr; 18 ton/hr	fabric filter	BH7, BH8	PM and PM HAPs	
<b>Stone Processing Equipment</b>							
RC1	n/a	Pioneer 3546 crusher (1972)	300 tons/hr				
FC1	n/a	Telsmith 25x40 crusher (1972)	225 tons/hr				
RC2	n/a	Symons Std 4' Cone crusher	300 tons/hr				
FC2-4	n/a	Symons Std 4' Cone crusher	150 tons/hr				
RSE,RSW	n/a	Seco 6 x 14 Triple Deck	300 tons/hr				
RS7	n/a	Portec 3 x 6 wet screen	300 tons/hr				
RS8	n/a	Tyler 3 x 8 wet screen	300 tons/hr				
FS1-3	n/a	Telsmith 6 x 16 screen (1972)	300 tons/hr				
FS4-5	n/a	Telsmith 6 x 16 screen (1972)	300 tons/hr				
RB0	n/a	48" Solite Corp. conveyor (1972)	300 tons/hr				
RB1-2	n/a	30" Solite Corp. conveyor (1972)	300 tons/hr				
RB3-9	n/a	24" Solite Corp. conveyor (1972)	300 tons/hr	Water spray	RB3-10WS		
RB10	n/a	24" Solite Corp. conveyor (1993)	300 tons/hr				September 1, 1993

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Stone Processing Equipment (con't)</b>							
RB11-14	n/a	Max. 36" Solite Corp. conveyor (1994)	300 tons/hr				
KB7a	n/a	30" Solite Corp. conveyor	300 tons/hr				
KB7b	n/a	24" Solite Corp. conveyor	300 tons/hr				
KB8a	n/a	30" Solite Corp. conveyor	300 tons/hr				
KB8b	n/a	24" Solite Corp. conveyor	300 tons/hr				
FB0	n/a	36" Solite Corp. conveyor	225 tons/hr				
FB1-4	n/a	30" Solite Corp. conveyor	225 tons/hr				
FB13-15	n/a	30" Solite Corp. conveyor	300 tons/hr				
FB20-23, 25-26	n/a	30" Solite Corp. conveyor	300 tons/hr				
FB24	n/a	42" Solite Corp. conveyor	300 tons/hr				

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Portable Stone Processing Equipment (Registration Numbers 32052, 32053, 32054)</b>							
PJC1		Crushking 32 x 42 Jaw crusher	500 tons/hr				August 1, 2006
PJC-C1		48" Belt Conveyor	400 tons/hour				August 1, 2006
PJC-C2		18" Belt Conveyor	100 tons/hour				August 1, 2006
PS-1		Screenking 6' x 20' Triple Deck Screen	400 tons/hour				August 1, 2006
PS-C1		36" Belt Conveyor	400 tons/hour				August 1, 2006
PS-C2, PS-C3, PS-C5		30" Stockpile Conveyor	400 tons/hour				August 1, 2006
PS-C4		60" Stockpile Conveyor	400 tons/hour				August 1, 2006
PS-C6		42" Belt Conveyor	400 tons/hour				August 1, 2006
PCC1		Crushking 4 1/4' Cone Crusher	400 tons/hour				August 1, 2006
PCC-C1		42" Belt Conveyor	400 tons/hour				August 1, 2006
PCC-C2		42" Belt Conveyor	400 tons/hour				August 1, 2006
PJC-G, PS-G, PCC-G		John Deere IC engine	300 HP				August 1, 2006

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Storage Silos and Bins</b>							
SU1-2	n/a	storage silos (1961,1966)	800 tons				
SU3	n/a	storage silo (1972)	70 tons				
SU4	n/a	storage bin (1993)	15 tons	water spray	SU4WS	PM-10	September 1, 1993
SU5	SU5V	lime storage silo (1991)	30 tons	fabric filter	FR4	PM-10	May 21, 1991
SU8-9	n/a	storage bin (1972)	279 ft <sup>3</sup>				
SU10	SU10V	storage bin (1991)	443 ft <sup>3</sup>	fabric filter	FR5,6	PM-10	
SU11	n/a	storage bin (1972)	163 ft <sup>3</sup>				
5,6BeltBH	5,6BeltBHV	#5, #6 belts (1991)	9 tons/hr	fabric filter	FR1,2	PM-10	
BlockBH	BlockBHV	Block system (1998)	9 tons/hr	fabric filter	FR3	PM-10	

\*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.



### **III. Fuel Burning Equipment Requirements – Kilns (ID # K7, K8)**

#### **A. Limitations**

1. Particulate emissions from the kilns (K7,K8) shall be controlled by the use of fabric filters.  
(9 VAC 5-80-110)
2. The approved fuels for the kilns (K7,K8) are waste fuel, residual oils, diesel fuel, and any combination of the previous fuels. A change in the fuels may require a permit to modify and operate.  
(9 VAC 5-80-110)
3. The permittee shall not cause or permit fuel with a sulfur content in excess of three pounds per million Btu to be used in the processing of lightweight aggregate.  
(9 VAC 5-80-110 and 9 VAC 5-40-2570)
4. Particulate emissions from the operation of the kilns shall not exceed the limits specified below:  
  
Kiln #K7 56.2 lb/hr  
Kiln #K8 63.2 lb/hr  
  
(9 VAC 5-80-110 and 9 VAC 5-40-2560)
5. Visible Emissions from each of the fabric filter stacks (BH7, BH8) shall not exceed twenty percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed sixty percent opacity.  
(9 VAC 5-40-2580 and 9 VAC 5-80-110)
6. Kiln emissions shall be controlled by proper operation and maintenance. Kiln operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and familiarization of the facility's and manufacturer's operating instructions, if available.  
(9 VAC 5-80-110)

#### **B. Monitoring**

1. Each fabric filter shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times.  
(9 VAC 5-80-110)

2. Visual emission observations from each fabric filter exhaust stack shall be conducted at least once per week. If visible emissions are observed from any fabric filter, the permittee shall:
  - a. Take timely corrective action such that the fabric filter resumes normal operation and there are no visible emissions from the fabric filter exhaust stack, or
  - b. Perform a visible emission evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the fabric filter do not exceed twenty (20) percent opacity. The VEE shall be conducted for a minimum of six minutes. If any of the 15-second observations exceed twenty (20) percent, the VEE shall be conducted for a total of 60 minutes. If compliance is not demonstrated by this VEE, timely corrective action shall be taken such that the fabric filter resumes operation with visible emissions of 20 percent or less.

Records shall be maintained, stating the date and time of each visible emissions check and whether visible emissions were observed, results of all VEEs, the observer's name and any required corrective action taken. Visible emissions checks are not required during start-ups, shut-downs, and malfunctions. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.  
(9 VAC 5-40-20)

### **C. Recordkeeping**

1. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the South Central Regional Office. These records shall include, but are not limited to: monthly and annual throughput of waste fuel, residual oil and diesel fuel (in 1000 gallons) for the kilns, and records of fuel sulfur content sufficient to demonstrate compliance with Condition III.A.3. The annual throughput shall be calculated as the sum of each consecutive twelve (12) month period. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.  
(9 VAC 5-80-110)
2. The permittee shall maintain records of the required training including a statement of time, place and nature of training provided. The permittee shall have available good written operating procedures and a maintenance schedule for the kilns and fabric filters. These procedures shall be based on the manufacturer's recommendations, at minimum. All records required by this condition shall be kept on site and made available for inspection by the DEQ.  
(9 VAC 5-80-110)

#### **D. Testing**

The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.  
(9 VAC 5-40-2630 and 9 VAC 5-80-110)

#### **IV. Process Equipment Requirements – Reserved**

#### **V. Process Equipment Requirements – bypass belt conveyor system (ID # RB10, SU4)**

##### **A. Limitations**

1. Particulate emissions from the bypass belt conveyor stone stockpile shall be controlled by wet suppression. There shall be no exemption from this requirement due to cold weather.  
(9 VAC 5-80-110 and Condition 4 of September 1, 1993 Permit)
2. Particulate emissions from the bypass conveyor feed hopper charging shall be controlled by wet suppression. There shall be no exemption from this requirement due to cold weather.  
(9 VAC 5-80-110 and Condition 5 of September 1, 1993 Permit)
3. Particulate emissions from the bypass belt conveyor feed hopper discharge and belt conveyor discharge shall be controlled by wet suppression. There shall be no exemption from this requirement due to cold weather.  
(9 VAC 5-80-110 and Condition 6 of September 1, 1993 Permit)
4. The yearly throughput of crushed stone with the bypass belt conveyor, feed hopper, and bypass belt conveyor stone stockpile shall not exceed 300,000 tons, calculated monthly as the sum of each consecutive twelve (12) month period.  
(9 VAC 5-80-110 and Condition 7 of September 1, 1993 Permit, as amended September 7, 2006)
5. Visible emissions from the bypass belt conveyor, feed hopper, and bypass belt conveyor stone stockpile emission points shall not exceed ten percent (10%) opacity.  
(9 VAC 5-50-260, 9 VAC 5-80-110, Condition 9 of September 1, 1993 Permit, and 40 CFR 60.672(b))
6. Particulate emissions from the operation of the bypass belt conveyor system shall not exceed the limitations specified below:

Total Suspended Particulate	1.7 lbs/hr	1.8 tons/yr
PM-10	1.3 lbs/hr	1.4 tons/yr

These emissions are derived from the estimated overall emission contribution. Compliance with the annual emissions limits shall be determined as stated in Condition numbers V.A.4 and 5.

(9 VAC 5-80-110, 9 VAC 5-50-260 and Condition 8 of September 1, 1993 Permit)

7. Unless otherwise specified in this permit, the permittee shall operate the bypass belt conveyor, feed hopper, and bypass belt conveyor stone stockpile in compliance with New Source Performance Standards, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants.  
(9 VAC 5-80-110, Condition 5 of September 1, 1993 Permit, and 40 CFR 60.670)
8. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.  
(9 VAC 5-80-110 and Condition 3 of September 1, 1993 Permit)
9. In order to minimize the duration and frequency of excess emissions due to malfunctions of air pollution control equipment, the permittee shall:
  - a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance. These records shall be maintained on site for a period of five (5) years and shall be made available to Department personnel upon request.
  - b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

(9 VAC 5-80-110 and Condition 17 of September 1, 1993 Permit)

## **B. Monitoring**

1. Visual emission observations from the bypass belt conveyor, feed hopper, and bypass belt conveyor stone stockpile emission points shall be conducted at least once per week. If visible emissions are observed, the permittee shall:
  - a. Take timely corrective action such that the bypass belt conveyor, feed hopper, or bypass belt conveyor stone stockpile resumes normal operation and there are no visible emissions from the bypass belt conveyor, feed hopper, or bypass belt conveyor stone stockpile emission points, or
  - b. Perform a visible emission evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the bypass belt conveyor, feed hopper, or bypass belt conveyor stone stockpile emission points do not exceed ten (10) percent opacity. The VEE shall be conducted for a minimum of six minutes. If any of the 15-second observations exceed ten (10) percent, the VEE shall be conducted for a total of 60 minutes. If compliance is not demonstrated by this VEE, timely corrective action shall be taken such that the

bypass belt conveyor, feed hopper, or bypass belt conveyor stone stockpile resumes operation with visible emissions of 10 percent or less.

Records shall be maintained, stating the date and time of each visible emissions check and whether visible emissions were observed, results of all VEEs, the observer's name and any required corrective action taken. Visible emissions checks are not required during start-ups, shut-downs, and malfunctions. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-20)

2. The permittee shall perform Method 9 and/or Method 22 testing, in accordance with the requirements of 40 CFR 60.675(c)(3) and (4) and/or 40 CFR 60.675(d), annually on the bypass belt conveyor, feed hopper, and bypass belt conveyor stone stockpile emission points.

(9 VAC 5-50-20)

### **C. Recordkeeping**

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with South Central Regional Office. These records shall include, but are not limited to, the yearly throughput of crushed stone through the bypass belt conveyor stone stockpile, feed hopper, and bypass belt calculated monthly as the sum of each consecutive twelve (12) month period. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 13 of September 1, 1993 Permit)

### **D. Testing**

The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.

(9 VAC 5-50-30 and 9 VAC 5-80-110)

## **VI. Reserved for Equipment Owned and Operated by Giant Resource Recovery - Arvon, Inc.**

## **VII. Stone Processing/Finishing Operations**

### **A. Limitations**

1. All crushers shall be fitted with liquid sprays or other appropriate systems which effectively limit the escape of airborne dust.

(9 VAC 5-80-110 and 9 VAC 5-40-1840)

2. Vibrating and shaker screens handling dry materials shall be enclosed or fitted with a collector system which will prevent the release of more than 0.05 grains per dry standard cubic foot of exhaust air.  
(9 VAC 5-80-110 and 9 VAC 5-40-1840)
3. All feeders, elevators, conveyors, transfer points, discharge points and loading points shall be equipped with collectors, sprays or other means when necessary to minimize the escape of dust.  
(9 VAC 5-80-110 and 9 VAC 5-40-1840)
4. Visual emission observations from each crusher, screen, conveyor, and transfer point shall not exceed 20 percent opacity, except for one six-minute period in any one hour in which visible emissions shall not exceed 60 percent opacity.  
(9 VAC 5-40-80, 9 VAC 5-40-1850, and 9 VAC 5-80-110)
5. Unless otherwise specified, dust emission controls shall include the following, or equivalent, as a minimum:
  - a. Dust from drills, shot piles, material handling, screens, crushers, load-outs, and traffic areas shall be controlled by wet suppression or equivalent (as approved by the DEQ).
  - b. All material being stockpiled shall be kept moist to control dust during storage and handling or covered at all times to minimize emissions.
  - c. Haul roads shall be controlled by wet suppression, or by application of asphalt, suitable chemicals, or equivalent methods approved by DEQ.
  - d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.  
(9 VAC 5-80-110 and 9 VAC 5-40-1860)

## **B. Monitoring**

1. Visual emission observations from each crusher, screen, conveyor, and transfer point shall be conducted at least once per week. If visible emissions are observed, the permittee shall:
  - a. Take timely corrective action such that the affected unit resumes normal operation and there are no visible emissions from the process, or
  - b. Perform a visible emission evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the equipment do not exceed twenty (20) percent opacity. The VEE shall be conducted for a minimum of six minutes. If any of the 15-second observations exceed 20 percent, the VEE

shall be conducted for a total of 60 minutes. If compliance is not demonstrated by this VEE, timely corrective action shall be taken such that the affected unit resumes operation within the applicable visible emissions limits.

Records shall be maintained, stating the date and time of each visible emissions check and whether visible emissions were observed, results of all VEEs, the observer's name and any required corrective action taken. Visible emissions checks are not required during start-ups, shut-downs, and malfunctions. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-40-1850 and 9 VAC 5-80-110)

## **VIII. Portable Stone Processing Plants (Registration Numbers 32052, 32053, 32054)**

### **A. Limitations**

1. Fugitive dust and fugitive emission controls shall include the following, or equivalent, as a minimum:
  - a. Dust from drills, shot piles, material handling, screens, crushers, load-outs, and traffic areas shall be controlled by wet suppression or equivalent (as approved by the DEQ). The wet suppression spray systems shall be operated at optimum design, and pressure gauges shall be installed (with adequate access for inspection of the measuring device) to indicate system performance.
  - b. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.
  - c. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals, or equivalent methods approved by the DEQ.
  - d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt, product, or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

(9 VAC 5-80-110, Condition 2 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 2 of August 1, 2006 Permit for Portable Screening Unit 32053, and Condition 2 of August 1, 2006 Permit for Portable Crushing Unit 32054)

2. The throughput of crushed stone to each portable unit (in tons per year) shall not exceed the limits below:

Primary Crusher (PJC-1)	2,000,000
Triple Deck Screen (PS-1)	1,600,000
Secondary Crusher (PCC-1)	1,600,000

- Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-110 and Condition 3 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 3 of August 1, 2006 Permit for Portable Screening Unit 32053, and Condition 3 of August 1, 2006 Permit for Portable Crushing Unit 32054)
3. The approved fuel for each of the IC engine-powered portable units is distillate oil. A change in the fuel may require a permit to modify and operate.  
(9 VAC 5-80-110 and Condition 4 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 4 of August 1, 2006 Permit for Portable Screening Unit 32053, and Condition 4 of August 1, 2006 Permit for Portable Crushing Unit 32054)
4. While operated at the Solite LLC / GRR (Registration Number 30200) facility, the throughput of distillate oil fuel to the associated IC-powered 300 HP diesel engines (PJC-G, PS-G, and PCC-G) shall not exceed 43,000 gallons per year for each engine, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-110 and Condition 5 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 5 of August 1, 2006 Permit for Portable Screening Unit 32053, and Condition 5 of August 1, 2006 Permit for Portable Crushing Unit 32054)
5. Emissions from the operation of the Portable Units shall not exceed the limits specified below:

Emission Unit	Particulate Matter (tons/yr)	PM-10 (tons/yr)
Primary Crusher Unit (PJC-1, PJC-C1, and PJC-C2)	5.5	2.6
Screening 6' x 20' Triple Deck Screen Unit (PS-1, PS-C1, PS-C2, PS-C3, PS-C4, PS-C5, and PS-C6)	6.3	2.7
Secondary Crusher Unit (PCC1-PCC-C1, and PCC-C2)	5.5	2.6

Emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible



evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition number VIII.A.2.

(9 VAC 5-80-110 and Condition 6 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 6 of August 1, 2006 Permit for Portable Screening Unit 32053, and Condition 6 of August 1, 2006 Permit for Portable Crushing Unit 32054)

6. While operated at the Solite LLC / GRR facility (Registration Number 30200), emissions from the operation of each IC-powered engine (PJC-G, PS-G, or PCC-G) shall not exceed the limits specified below:

Particulate Matter	0.8 lbs/hr	1.1 tons/yr
PM-10	0.7 lbs/hr	0.9 tons/yr
Nitrogen Oxides	9.3 lbs/hr	13.0 tons/yr
Carbon Monoxide	2.0 lbs/hr	2.8 tons/yr
Volatile Organic Compounds	0.8 lbs/hr	1.1 tons/yr

Emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition number VIII.A.4.

(9 VAC 5-80-110 and Condition 7 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 7 of August 1, 2006 Permit for Portable Screening Unit 32053, and Condition 7 of August 1, 2006 Permit for Portable Crushing Unit 32054)

7. Visible emissions from the portable units shall not exceed the following limits, as determined by EPA Method 9 (reference 40 CFR 60, Appendix A):

Emission Unit		Regulatory Citation
Primary Crusher (PJC-1)	15% opacity	40 CFR 60.672 (c)
Screening Triple Deck Screen (PS-1)	10% opacity	40 CFR 60.672 (b)
Secondary Crusher (PCC-1)	15% opacity	40 CFR 60.672 (c)

(9 VAC 5-80-110, Condition 8 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 8 of August 1, 2006 Permit for Portable Screening Unit 32053, Condition 8 of August 1, 2006 Permit for Portable Crushing Unit 32054, 40 CFR 60.672(b), and 40 CFR 60.672(c))

8. Visible emissions from screening, stockpiles, conveyor transfers, and fugitive emission sources shall not exceed 10% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).  
(9 VAC 5-80-110, 9 VAC 5-50-410, and Condition 9 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 9 of August 1, 2006 Permit for Portable Screening Unit 32053, Condition 9 of August 1, 2006 Permit for Portable Crushing Unit 32054, and 40 CFR 60.672 (b))

9. Visible emissions from each IC-powered engine (PJC-G, PS-G, PCC-G) shall not exceed 10% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).  
(9 VAC 5-80-110, Condition 10 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 10 of August 1, 2006 Permit for Portable Screening Unit 32053, and Condition 10 of August 1, 2006 Permit for Portable Crushing Unit 32054)
10. Except where this permit is more restrictive than the applicable requirement, the NSPS equipment (PJC1, PJC-C1, PJC-C2, PS1, PS-C1 through PS-C6, PCC1, PCC-C1, and PCC-C2) shall be operated in compliance with the requirements of 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants.  
(9 VAC 5-80-110, Condition 11 of August 1, 2006, Permit for Portable Crushing Unit 32052, Condition 11 of August 1, 2006 Permit for Portable Screening Unit 32053, Condition 11 of August 1, 2006, Permit for Portable Crushing Unit 32054, and 40 CFR 60.670)

## **B. Monitoring**

1. Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall be conducted by the permittee on the following equipment: Portable Primary Crusher (PJC-1), conveyors PJC-C1 and PJC-C2, Portable Triple Deck Screen (PS-1) and conveyors PS-C1 through PS-C6, Portable Secondary Crusher (PCC-1) and conveyors PCC-C1 and PCC-C2. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Director, South Central Region. The evaluation shall be performed, reported, and demonstrate compliance, within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the facility. One copy of the test results shall be submitted to the Director, South Central Region, within 60 or 180 days of start-up and shall conform to the test report format enclosed with this permit. A copy of the test results shall be submitted to:

Associate Director  
Office of Air Enforcement (3AP10)  
U.S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

(9 VAC 5-80-110, Condition 12 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 12 of August 1, 2006 Permit for Portable Screening Unit 32053, Condition 12 of August 1, 2006 Permit for Portable Crushing Unit 32054, and 40 CFR 60.8)

2. Visible Emission Evaluations required in Condition VIII.B.1, on Screen PS-1 and conveyors PJC-C1, PJC-C2, PS-C1 through PS-C6, PCC-C1, and PCC-C2 may be reduced to ten (10) sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average if:
  - a. There are no individual readings greater than 10% for that emission point; and
  - b. There are no more than three (3) readings of 10% opacity for the one (1) hour period for that emission point.

(9 VAC 5-80-110, Condition 13 of August 1, 2006 Permit for Portable Crushing Unit 32052, Conditions 13 and 14 of August 1, 2006 Permit for Portable Screening Unit 32053, Condition 13 of August 1, 2006 Permit for Portable Crushing Unit 32054, and 40 CFR 60.675(c)(3))

3. Visible Emission Evaluations required in Condition VIII.B.1, on crushers PJC-1 and PCC-1 may be reduced to ten (10) sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average if:
  - a. There are no individual readings greater than 15% for that emission point; and
  - b. There are no more than three (3) readings of 15% opacity for the one (1) hour period for that emission point.

(Condition 14 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 14 of August 1, 2006 Permit for Portable Crushing Unit 32054, 40 CFR 60.675(c)(4) and 9 VAC 5-50-410)

4. Upon request by the DEQ, the permittee shall conduct additional Visible Emission Evaluations (VEE) to demonstrate compliance with the visible emission limits contained in this permit. The details of the test shall be arranged with the Director, South Central Region.  
(9 VAC 5-80-110 and Condition 15 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 15 of August 1, 2006 Permit for Portable Screening Unit 32053, and Condition 15 of August 1, 2006 Permit for Portable Crushing Unit 32054)

### **C. Recordkeeping and Reporting**

1. The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, South Central Region. These records shall include, but are not limited to:
  - a. Annual throughput of crushed stone to each Portable Unit (PJC1, PS-1, and PCC1), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the

individual monthly totals for the preceding 11 months.

- b. For the Solite LLC / GRR facility (Registration Number 30200), annual throughput of distillate oil fuel for the 300 HP IC engine (PJC-G, PS-G, or PCC-G) associated with each unit, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
- c. Scheduled and unscheduled maintenance, and operator training.
- d. Results of all visible emission evaluations.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-110 and Condition 16 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 16 of August 1, 2006 Permit for Portable Screening Unit 32053, and Condition 16 of August 1, 2006 Permit for Portable Crushing Unit 32054)

- 2. The permittee shall furnish written notification to the Director, South Central Region of:
  - a. The actual start-up date of each Portable Unit (PJC1, PS-1, and PCC1), including both the home office and the current address or location of the portable plant, postmarked within 15 days after actual start-up.
  - b. The anticipated date of the visible emissions evaluations, postmarked at least 30 days prior to such date.

Copies of the written notifications referenced in items a and b above are to be sent to the U.S. Environmental Protection Agency at the address listed in Condition VIII.B.1. (9 VAC 5-80-110, Condition 17 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 17 of August 1, 2006 Permit for Portable Screening Unit 32053, Condition 17 of August 1, 2006 Permit for Portable Crushing Unit 32054, and 9 VAC 5-50-410)

#### **D. Permit Invalidation**

- 1. Approval to install the Portable Units (Registration Numbers 32052, 32053, 32054) shall become invalid, unless an extension is granted by the DEQ, if:
  - a. A program of continuous modification is not commenced within the latest of the following:
    - i. 18 months from August 1, 2006;

- ii. Nine months from the date that the last permit or other authorization was issued from any other governmental entity;
- iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or

b. A program of modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-110, Condition 18 of August 1, 2006 Permit for Portable Crushing Unit 32052, Condition 18 of August 1, 2006 Permit for Portable Screening Unit 32053, and Condition 18 of August 1, 2006 Permit for Portable Crushing Unit 32054)

## **IX. MACT Requirements - Subpart DD (Off-Site Waste and Recovery Operations)**

### **A. Limitations**

1. For the purposes of this section, all terms used herein shall have the meaning given them in 40 CFR 63 Subpart A and 40 CFR 63 Subpart DD. Affected sources include off-site material management units (tanks, containers, or transfer systems), process vents, and equipment leaks, as specified in 40 CFR 63.680 (c).  
(9 VAC 5-80-110 and 40 CFR 63.680)
2. Except where this permit is more restrictive than the applicable requirement, the permittee shall comply with the requirements of 40 CFR Part 63 Subpart DD, National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations, including applicable General Provisions in 40 CFR Part 63 Subpart A and applicable cross-referenced requirements from 40 CFR 63 Subparts OO and PP.  
(9 VAC 5-80-110 and 40 CFR 63.680)
3. For each affected off-site material treatment unit specified in Condition IX.A.1. of this permit, the permittee shall comply with the applicable requirements specified in 40 CFR 63.683, Standards: General.  
(9 VAC 5-80-110 and 40 CFR 63.683)
4. For each affected tank specified in Condition IX.A.1. of this permit, the permittee shall comply with the applicable requirements specified in 40 CFR 63.685, Standards: Tanks, including the control levels specified in Table 3 to Subpart DD.  
(9 VAC 5-80-110 and 40 CFR 63.685)
5. For each affected container specified in Condition IX.A.1. of this permit, the permittee shall comply with the applicable requirements specified in 40 CFR 63.688, Standards: Containers.  
(9 VAC 5-80-110 and 40 CFR 63.688)

6. For each affected transfer system specified in Condition IX.A.1. of this permit, the permittee shall comply with the applicable requirements specified in 40 CFR 63.689, Standards: Transfer Systems.  
(9 VAC 5-80-110 and 40 CFR 63.689)
7. For equipment leaks specified in Condition IX.A.1. of this permit, the permittee shall comply with the applicable requirements specified in 40 CFR 63.691, Standards: Equipment Leaks.  
(9 VAC 5-80-110 and 40 CFR 63.691)
8. Should the permittee opt to install closed-vent system(s) as specified in Condition IX.A.1. of this permit, such systems shall comply with the applicable requirements specified in 40 CFR 63.693, Standards: Closed-vent systems and control devices.  
(9 VAC 5-80-110 and 40 CFR 63.693)

#### **B. Inspection and Monitoring**

For each affected source, the permittee shall comply with the applicable requirements specified in 40 CFR 63.695, Inspection and Monitoring Requirements. Affected sources include any tank subject to Level 2 controls as specified in 40 CFR 63.685, any closed-vent system, and any transfer system covers as specified in Condition IX.A.1 of this permit.  
(9 VAC 5-80-110 and 40 CFR 63.695)

#### **C. Recordkeeping and Reporting**

1. The permittee shall keep records for each affected source in accordance with the requirements of 40 CFR 63.696. Such requirements include provisions of 40 CFR 63.10 of 40 CFR 63 Subpart A, as shown in 40 CFR 63 Subpart DD, Table 2, General Provisions Applicability to Subpart DD.  
(9 VAC 5-80-110 and 40 CFR 63.696)
2. The permittee shall submit reports for each affected source in accordance with the requirements of 40 CFR 63.697. Such requirements include provisions of 40 CFR 63.9 and 63.10 of 40 CFR 63 Subpart A, as shown in 40 CFR 63 Subpart DD, Table 2, General Provisions Applicability to Subpart DD.  
(9 VAC 5-80-110 and 40 CFR 63.697)

#### **D. Testing**

All testing conducted to demonstrate compliance with the limitations in Section IX.A. of this permit (Standards specified in 40 CFR 63.683 through 63.693) shall be conducted in accordance with the applicable testing methods and procedures as specified in 40 CFR 63.694.  
(9 VAC 5-80-110, 40 CFR 63.694)

## **X. MACT Requirements - Subpart EEE (Hazardous Waste Combustors)**

### **A. Limitations**

1. For the purposes of this section, all terms used herein shall have the meaning given them in 40 CFR 63 Subpart A and 40 CFR 63 Subpart EEE.  
(9 VAC 5-80-110 and 40 CFR 63.1201)
2. The permittee shall comply with the requirements of 40 CFR Part 63 Subpart A, General Provisions, as indicated in 40 CFR Part 63 Subpart EEE, Table 1, General Provisions Applicability to Subpart EEE.  
(9 VAC 5-80-110 and 40 CFR 63.1200)
3. No later than the compliance dates for existing sources as specified in 40 CFR 63 Subpart EEE, each hazardous waste burning lightweight aggregate kiln (K7, K8) shall meet the emission limits and destruction and removal efficiency (DRE) standards found in 40 CFR 63.1205 or 40 CFR 63.1221, Standards For Hazardous Waste Burning Lightweight Aggregate Kilns, as applicable.  
(9 VAC 5-80-110, 40 CFR 63.1205, and 40 CFR 1221)
4. No later than the compliance dates for existing sources as specified in 40 CFR 63 Subpart EEE, the permittee shall demonstrate to DEQ (South Central Regional Office) that each kiln (K7, K8) is in compliance. The compliance demonstrations shall be in accordance with the Compliance Provisions of 40 CFR 64.1206.  
(9 VAC 5-80-110 and 40 CFR 63.1206)
5. The permittee shall operate in accordance with the Notification of Compliance (NOC) submitted to DEQ on May 11, 2004 and revised on January 31, 2005 (as summarized by permit application submittals dated March 29, 2004, June 18, 2004, October 27, 2004, November 19, 2004, and June 17, 2005 and by Attachments A, B.1, and B.2 of this permit). In the event of subsequent changes to the NOC, the permittee shall:
  - a. operate in accordance with the most recent NOC (based on postmark date of the submittal), and
  - b. together with the revised NOC, submit a permit modification application to incorporate the revision into the Title V permit.  
(9 VAC 5-80-110, 40 CFR 63.1206, 40 CFR 63.1210, and 40 CFR 70.7(e)(2)(v)).
6. The permittee shall operate in accordance with the Feedstream Analysis Plan (FAP) submitted to DEQ on May 4, 2006, as amended July 17, 2006. In the event of subsequent changes to the FAP, the permittee shall submit a copy of the change to DEQ for review, and record the date of the submittal and the nature of the change in a logbook kept permanently onsite. The permittee shall operate in accordance with the most recent FAP (based on postmark date of the submittal).  
(9 VAC 5-80-110 and 40 CFR 63.1209)

7. The permittee shall operate in accordance with the Startup, Shutdown, and Malfunction Plan (SSMP) submitted to DEQ on May 4, 2006, as amended July 17, 2006. In the event of subsequent changes to the SSMP, the permittee shall submit a copy of each change to DEQ for review, and record the date of the submittal and the nature of the change in a logbook kept permanently onsite. The permittee shall operate in accordance with the most recent SSMP (based on postmark date of the submittal).  
(9 VAC 5-80-110, 40 CFR 63.6, and 40 CFR 63.1206)
8. The permittee shall operate in accordance with the Operations and Maintenance Plan (OMP) submitted to DEQ on May 4, 2006, as amended July 17, 2006. In the event of subsequent changes to the OMP, the permittee shall submit a copy of each change to DEQ for review, and record the date of the submittal and the nature of the change in a logbook kept permanently onsite. The permittee shall operate in accordance with the most recent OMP (based on postmark date of the submittal).  
(9 VAC 5-80-110 and 40 CFR 63.1206)
9. The permittee shall operate in accordance with the Operator Training and Certification Plan (OTCP) submitted to DEQ on May 4, 2006, as amended July 17, 2006. In the event of subsequent changes to the OTCP, the permittee shall submit a copy of each change to DEQ for review, and record the date of the submittal and the nature of the change in a logbook kept permanently onsite. The permittee shall operate in accordance with the most recent OTCP (based on postmark date of the submittal).  
(9 VAC 5-80-110 and 40 CFR 63.1206)
10. The permittee shall operate in accordance with the Continuous Monitoring System Quality Assurance / Quality Control Plan (CMS Plan) submitted to DEQ on June 8, 2006. In the event of subsequent changes to the CMS Plan, the permittee shall submit a copy of each change to DEQ for review, and record the date of the submittal and the nature of the change in a logbook kept permanently onsite. The permittee shall operate in accordance with the most recent CMS Plan (based on postmark date of the submittal).  
(9 VAC 5-80-110 and 40 CFR 63.8)
11. The hazardous waste combustion operation shall be equipped with an Automatic Waste Feed Cutoff (AWFCO) system which meets all requirements of Subpart EEE. AWFCO system specifications shall be contained in the permittee's operation and maintenance plan. Unless an alternate set of operating specifications for the AWFCO are approved in writing by DEQ, the specifications shall require, at a minimum, that the permittee shall:
  - a. provide the AWFCO with interlocks so that it shall immediately and automatically cut off the hazardous waste feed when any of the following occurs:
    - (1) any operating parameter limit specified in the NOC is exceeded;



- (2) any Subpart EEE emission standard monitored by a Continuous Emissions Monitoring System (CEMS) is exceeded;
- (3) the span value of any Continuous Monitoring System (CMS) detector, except a CEMS is met or exceeded;
- (4) upon malfunction of a CMS monitoring an operating parameter limit established in the NOC or an emission level; or
- (5) when any component of the automatic waste feed cutoff system fails.

b. during any AWFCO event:

- (1) continue to vent combustion gases to the air pollution control system;
- (2) continue to monitor all operating parameters and emission limits identified in Condition X.A.5. of this permit, and not resume hazardous waste feed until all such operating parameters and emission limits are within specified limits;

c. following any AWFCO event where there is an exceedance of an emission standard or operating requirement, investigate the cause of the AWFCO, take appropriate corrective measures to minimize future AWFCOs, and record the findings and corrective measures in the operating record.

d. for each set of 10 exceedances of an operating parameter or emission standard during a 60-day block period, submit a written report to DEQ within 5 calendar days of the 10<sup>th</sup> exceedance.

e. at least weekly, test the AWFCO system and associated alarms to demonstrate operability by electronically simulating an exceedance of each operating parameter or emission standard.

(9 VAC 5-80-110 and 40 CFR 63.1206)

12. Each fabric filter exhaust (BH7, BH8) shall be equipped with a Bag Leak Detection System (BLDS). Operating specifications for the BLDS shall be included in the permittee's operating and maintenance plan. Those specifications shall require, at a minimum, that the permittee shall:

a. install a BLDS system that:

- (1) is certified by the manufacturer to be capable of continuously detecting and recording particulate matter emissions at concentrations of 1.0 milligrams per actual cubic meter unless a higher sensitivity rating is demonstrated as satisfactory and approved in writing by DEQ, and

- (2) provides output of relative or absolute particulate matter loadings,
- (3) is equipped with an alarm system that will sound an audible alarm when an increase in relative particulate matter loading is detected over a preset level,
- b. install and operate the BLDS in a manner consistent with USEPA's Office of Air Quality Planning and Standards Fabric Filter Bag Leak Detection Guidance (EPA Document # EPA-454/R-98-015), or as otherwise approved in writing by DEQ,
- c. initiate the procedures used to determine the cause of any alarm within 30 minutes of the time the alarm first sounds,
- d. alleviate the cause of the alarm by taking necessary corrective action,
- e. keep records of the date, time, and duration of each alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and corrective action taken,
- f. beginning October 14, 2008, record the percent of the operating time during each 6-month period that the alarm sounds, and provide a notification to DEQ within 30 days of the end of the 6-month period if either kiln (K7, K8) is operated when the detector response for the associated BLDS exceeds the alarm set-point more than 5% of the time. This condition applies only to the extent it is effective under 40 CFR 63 Subpart EEE.

(9 VAC 5-80-110 and 40 CFR 63.1206)

## **B. Monitoring**

For each kiln specified in Condition X.A.3. of this permit (K7,K8), the permittee shall comply with the applicable requirements specified in 40 CFR 63.1209, Monitoring Requirements. However, compliance with the requirements to install, calibrate, maintain, and operate the PM CEMS is not required until such time that all performance specifications and operations requirements applicable to PM CEMS have been promulgated.

In accordance with 40 CFR 63.1209, the permittee shall conduct monitoring as described in their most recent NOC submittal. Monitoring requirements based on the NOC are summarized in Attachments A, B.1 and B.2 of this permit. Adherence to the monitoring requirements summarized in Attachments A, B.1 and B.2 of the permit does not relieve the permittee of any additional or more rigorous monitoring requirements specified in 40 CFR 63.1209.

(9 VAC 5-80-110 and 40 CFR 63.1209)

## **C. Notification, Recordkeeping, and Reporting**

1. The permittee shall provide notifications in accordance with the requirements of 40 CFR 63.1210. Such requirements include provisions of 40 CFR 63.9 of 40 CFR 63 Subpart A, as shown in 40 CFR 63 Subpart EEE, Table 1, General Provisions Applicability to Subpart EEE.  
(9 VAC 5-80-110 and 40 CFR 63.1210)
2. The permittee shall keep records and submit reports for each affected source subject to the requirements of 40 CFR Part 63 Subpart EEE, (K7,K8) in compliance with the recordkeeping and reporting requirements of 40 CFR 63.1211. Such requirements include provisions of 40 CFR 63.10 of 40 CFR 63 Subpart A, as shown in 40 CFR 63 Subpart EEE, Table 1, General Provisions Applicability to Subpart EEE.  
(9 VAC 5-80-110 and 40 CFR 63.1211)

#### **D. Testing**

The permittee shall perform tests on each kiln (K7,K8) as required by 40 CFR 63.7 and 40 CFR 63.1207, in order to demonstrate compliance with the standards specified in 40 CFR 63.1205 and 40 CFR 63.1221, as applicable. Testing shall be conducted per the test methods and procedures specified in 40 CFR 63.1208. Alternatively, previously obtained data may be submitted in lieu of testing, provided the data meet the quality criteria specified in 40 CFR 63.1207.  
(9 VAC 5-80-110, 40 CFR 63.1207, and 40 CFR 63.1208)

### **XI. Reserved for Equipment Owned and Operated by Giant Resource Recovery - Arvonnia, Inc.**

### **XII. Facility Wide Conditions**

#### **Existing source standard for visible emissions**

Unless otherwise specified in this permit, no owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any visible emissions which exhibit greater than 20% opacity, except for one six-minute period in any one hour of not more than 60% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.  
(9 VAC 5-40-80)

#### **New source standard for visible emissions**

Unless otherwise specified in this permit, no owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any visible emissions which exhibit greater than 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.  
(9 VAC 5-50-80)

### **XIII. Insignificant Emission Units**

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
CSU5-9	coal storage	9 VAC 5-80-720 B	PM	
1	Kewanee boiler	9 VAC 5-80-720 B	PM, VOC, CO, NO <sub>x</sub> , SO <sub>2</sub>	
CB2-CB6	coal conveying	9 VAC 5-80-720 B	PM	
TA, TB	10,000 gallon storage tank	9 VAC 5-80-720 A		

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

### **XIV. Permit Shield & Inapplicable Requirements**

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
None identified.		

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.  
(9 VAC 5-80-140)

### **XV. General Conditions**

#### **A. Federal Enforceability**

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.

(9 VAC 5-80-110 N)

## **B. Permit Expiration**

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

## **C. Recordkeeping and Reporting**

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
  - a. The date, place as defined in the permit, and time of sampling or measurements.
  - b. The date(s) analyses were performed.

- c. The company or entity that performed the analyses.
- d. The analytical techniques or methods used.
- e. The results of such analyses.
- f. The operating conditions existing at the time of sampling or measurement.

(9 VAC 5-80-110 F)

- 2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

(9 VAC 5-80-110 F)

- 3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ every six months. Each report must be postmarked within 30 days following each six-month reporting period. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:
  - a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.
  - b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:
    - (1) Exceedance of emissions limitations or operational restrictions;
    - (2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,
    - (3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.
  - c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements occurred during this semi-annual reporting period.”

(9 VAC 5-80-110 F)

#### **D. Annual Compliance Certification**

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to DEQ and EPA a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The time period to be covered by the certification is the calendar months January through December. Each report must be postmarked within 30 days following each annual period. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.
2. The identification of each term or condition of the permit that is the basis of the certification.
3. The compliance status.
4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
6. Such other facts as the permit may require to determine the compliance status of the source.

One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)  
U. S. Environmental Protection Agency, Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029.

(9 VAC 5-80-110 K.5)

#### **E. Permit Deviation Reporting**

The permittee shall notify the South Central Regional Office, within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit

deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition XI.C.3. of this permit.  
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

#### **F. Failure/Malfunction Reporting**

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, South Central Regional Office by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, South Central Regional Office.  
(9 VAC 5-20-180 C)

#### **G. Severability**

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.  
(9 VAC 5-80-110 G.1)

#### **H. Duty to Comply**

The permittee shall comply with all terms and conditions of this permit, including those terms and conditions set forth in a tabular format. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.  
(9 VAC 5-80-110 G.2)



**I. Need to Halt or Reduce Activity not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.  
(9 VAC 5-80-110 G.3)

**J. Permit Modification**

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1790, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.  
(9 VAC 5-80-190 and 9 VAC 5-80-260)

**K. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege.  
(9 VAC 5-80-110 G.5)

**L. Duty to Submit Information**

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.  
(9 VAC 5-80-110 G.6)
2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.  
(9 VAC 5-80-110 K.1)

**M. Duty to Pay Permit Fees**

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by **April 15** of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department.  
(9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

#### **N. Fugitive Dust Emission Standards**

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;
4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 and 9 VAC 5-50-90)

#### **O. Startup, Shutdown, and Malfunction**

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-40-20 and 9 VAC 5-50-20)

**P. Alternative Operating Scenarios**

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1. (9 VAC 5-80-110 J)

**Q. Inspection and Entry Requirements**

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

**R. Reopening For Cause**

The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

1. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
3. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

#### **S. Permit Availability**

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.

(9 VAC 5-80-150 E)

#### **T. Transfer of Permits**

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.  
(9 VAC 5-80-160)
2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.  
(9 VAC 5-80-160)
3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.  
(9 VAC 5-80-160)

#### **U. Malfunction as an Affirmative Defense**

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the conditions of paragraph 2 are met.
2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
  - a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.

- b. The permitted facility was at the time being properly operated.
- c. During the period of malfunction, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit.
- d. The permittee notified the board of the malfunction within two working days following the time when the emissions limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, telegraph, or any other method that allows the permittee to comply with the deadline. The notice fulfills the requirement of 9 VAC 5-80-110 F.2. b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirements under 9 VAC 5-20-180 C.
- e. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
- f. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

#### **V. Permit Revocation or Termination for Cause**

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe, any permit for any of the grounds for revocation or termination or for any other violations of these regulations.

(9 VAC 5-80-190 C and 9 VAC 5-80-260)

#### **W. Duty to Supplement or Correct Application**

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.

(9 VAC 5-80-80 E)

## **X. Stratospheric Ozone Protection**

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.  
(40 CFR Part 82, Subparts A-F)

## **Y. Accidental Release Prevention**

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.  
(40 CFR Part 68)

## **Z. Changes to Permits for Emissions Trading**

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.  
(9 VAC 5-80-110 I)

## **AA. Emissions Trading**

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

**Solite, LLC Permit Number : VA-30200**  
**Attachment A – Operating Parameter Limits (Revision 1.0)**

<b>Operating Parameter</b>	<b>Kiln 7</b>	<b>Kiln 8</b>	<b>CMS Device</b>	<b>Averaging Period</b>	<b>Associated Standards</b>
Minimum Raw Material Feedrate (tons/hr)	4.0	4.0	Weigh belt scale	Hourly rolling average (HRA)	Residence time <sup>1</sup>
Maximum Lightweight Aggregate Production Rate (tons/hr)	14.57	16.54	Weigh belt scale	HRA	PM, LVM, SVM, HCl/Cl <sub>2</sub>
Maximum Hazardous Waste Throughput (grams/hr)	1,662,887	1,820,342	Flow meter	HRA	D/F, DRE, POHC
Minimum Mid-Kiln Temperature ( F)	829	824	Thermocouple	HRA	D/F, DRE
Maximum Kiln Exit (post quench) Temperature ( F)	400	400	Thermocouple	HRA	D/F, LVM, SVM
Kiln Exit Negative Pressure (“w.c.)	At least 0.01” negative pressure but no more than 1.05” negative pressure	At least 0.01” negative pressure but no more than 1.10” negative pressure	Pressure transducer	Instantaneous minimum; HRA maximum	D/F, DRE, Combustion system leaks, Residence time
Minimum Shroud Negative Pressure	At least 0.01” negative pressure	At least 0.01” negative pressure	Pressure transducer	Instantaneous	Combustion system leaks
Minimum Waste Feed Nozzle Atomizing Pressure	40 pounds per square inch gauge (psig)	40 psig	Pressure transducer	One minute average	DRE
Maximum Viscosity of Liquid Waste Feed	200 centipoise	200 centipoise	ASTM D-2196	Sample each tank	Good combustion practice
Maximum LVM Feedrate (grams/hr total arsenic, beryllium, and chromium, combined)	2392	9347	Weigh belt scale Fuel Flow Meter	HRA <sup>2</sup>	LVM
Maximum LVM Feedrate (grams/hr pumpable arsenic, beryllium, and chromium, combined)	1872	8923	Weigh belt scale Fuel Flow Meter	HRA <sup>2</sup>	LVM
Maximum SVM Feedrate (grams/hr total cadmium and lead, combined)	3643	9325	Weigh belt scale Fuel Flow Meter	HRA <sup>2</sup>	SVM
Maximum Annual Average Mercury Feedrate (g/hr)	0.472	0.515	Weigh belt scale Fuel Flow Meter	Annual Rolling Average	Multi-pathway risk assessment <sup>1,3</sup>
Maximum Mercury Feedrate (g/hr total) <sup>4</sup>	2.02	2.18	Weigh belt scale Fuel Flow Meter	HRA <sup>2</sup>	Mercury (Hg)
Maximum Waste Fuel Mercury Feedrate (g/hr) <sup>4</sup> <b>(MTEC Option)</b>	1.08	1.08	Fuel Flow Meter	HRA <sup>2</sup>	Mercury (Hg)
Maximum Chloride Feedrate (grams/hr, total chlorine and chloride combined) <sup>5</sup>	15,708.1	16,168.2	Weigh belt scale Fuel Flow Meter	HRA <sup>2</sup>	HCl/Cl <sub>2</sub>
Stack Gas CO Concentration (ppm), corrected to 7% O <sub>2</sub> , dry basis	72	72	CEMS	HRA	CO/HC
Bag Leak Detection System	See Permit Condition X.A.12.				PM

<sup>1</sup> These limits are not MACT requirements but are included to allow streamlining of Solite’s RCRA permit.

<sup>2</sup> MACT allows 12 hr rolling average for LVM, SVM, and HCl/Cl<sub>2</sub>; however, Solite LLC has elected to use a 1 hr rolling average.

<sup>3</sup> The limit on annual rolling average mercury feedrate may be adjusted based on DEQ review and approval of a revised multi-pathway risk assessment.

<sup>4</sup> Solite may comply with either mercury limit. If MTEC option is selected, a minimum stack flow rate of 150 dscmm 7% O<sub>2</sub> also applies.

<sup>5</sup> Chlorine and chloride feedrate limit includes contribution(s) from the propellant gas stream (“Krunchers”).

**Solite, LLC**  
**Permit Number : VA-30200**  
**Attachment B.1 – Emission Limits and Associated Operating Parameters Applicable Under 40 CFR 63.1205**  
**Effective Prior to October 14, 2008**

<b>Pollutant or Operating Condition</b>	<b>Emission Limit or DRE Standard<sup>1</sup></b>	<b>Associated Operating Parameters</b>
Dioxins/Furans	0.20 ng TEQ/dscm <b>OR</b> Rapid quench of the combustion gas temperature to 400 °F or lower at kiln exit based on the average of the test run average temperatures	Maximum Hazardous Waste Throughput Minimum Mid-kiln Temperature Maximum Kiln Exit Temperature Kiln Exit Negative Pressure
Mercury	120 g/dscm <b>OR</b> Hazardous waste feedrate corresponding to maximum theoretical emission concentration (MTEC) of 120 g/dscm, 12-hr rolling average	Total Mercury Feedrate Or Waste Fuel Mercury Feedrate
Lead and cadmium (SVM)	250 g/dscm, combined emissions	Maximum Kiln Exit Temperature Maximum Production Rate Maximum SVM Feedrate
Arsenic, beryllium, and chromium (LVM)	110 g/dscm, combined emissions	Maximum Kiln Exit Temperature Maximum Production Rate Maximum LVM Feedrate
Carbon monoxide and hydrocarbons	100 ppmv CO, hourly rolling average <b>OR</b> 20ppmv HC, hourly rolling average, reported as propane	Continuous Emission Monitoring System
Hydrochloric acid and chlorine gas	600 ppmv, combined emissions, expressed as hydrochloric acid equivalents	Maximum Production Rate Maximum Feedrate, chlorine and chlorides
Particulate matter	57 mg/dscm (0.025 gr/dscf)	Bag Leak Detection System; Pressure Drop
Destruction and Removal Efficiency (DRE)/POHC	99.99% destruction and removal efficiency <sup>2</sup> DRE as demonstrated during performance testing	Minimum Mid-kiln Temperature Maximum Production Rate Maximum Hazardous Waste Feedrate Minimum Waste Feed Nozzle Atomizing Pressure

<sup>1</sup> All limits corrected to 7% O<sub>2</sub>, dry basis

<sup>2</sup> It is noted that the required DRE for dioxin-listed hazardous wastes (F020, F022, F023, F026, and F027 under 40 CFR 261.31) is 99.9999%. However, because Solite has not sought permitting under TSCA and is currently prohibited under its RCRA permit from receiving PCBs subject to the disposal requirements of 40 CFR.761, this standard does not currently apply. In the event Solite seeks and receives approval to receive such wastes, they will need to submit a revised NOC and a Title V permit amendment application to incorporate a compliance demonstration for dioxin-listed hazardous waste.



**Solite, LLC**  
**Permit Number : VA-30200**  
**Attachment B.2 – Emission Limits and Associated Operating Parameters Applicable Under 40 CFR 63.1221**  
**Applicable on and after the Compliance Date of October 14, 2008**

<b>Pollutant or Operating Condition</b>	<b>Emission Limit or DRE Standard<sup>1</sup></b>	<b>Associated Operating Parameters</b>
Dioxins/Furans	0.20 ng TEQ/dscm <b>OR</b> Rapid quench of the combustion gas temperature to 400° F or lower at kiln exit based on the average of the test run average temperatures	Maximum Hazardous Waste Throughput Minimum Mid-kiln Temperature Maximum Kiln Exit Temperature Kiln Exit Negative Pressure
Mercury	120 µg/dscm <b>OR</b> Hazardous waste feedrate corresponding to maximum theoretical emission concentration (MTEC) of 120 µg/dscm, 12-hr rolling average	Total Mercury Feedrate Or Waste Fuel Mercury Feedrate
Lead and cadmium (SVM)	250 µg/dscm, combined emissions <b>AND</b> $3.0 \times 10^{-4}$ lbs/MMBtu <sup>2</sup>	Maximum Kiln Exit Temperature Maximum Production Rate Maximum SVM Feedrate
Arsenic, beryllium, and chromium (LVM)	110 µg/dscm, combined emissions <b>AND</b> $9.5 \times 10^{-5}$ lbs/MMBtu <sup>3</sup>	Maximum Kiln Exit Temperature Maximum Production Rate Maximum LVM Feedrate
Carbon monoxide and hydrocarbons	100 ppmv CO, hourly rolling average <b>OR</b> 20ppmv HC, hourly rolling average, reported as propane	Continuous Emission Monitoring System
Hydrochloric acid and chlorine gas	600 ppmv, combined emissions, expressed as hydrochloric acid equivalents	Maximum Production Rate Maximum Feedrate, chlorine and chlorides
Particulate matter	57 mg/dscm (0.025 gr/dscf)	Bag Leak Detection System; Pressure Drop
Destruction and Removal Efficiency (DRE)/POHC	99.99% destruction and removal efficiency <sup>4</sup> DRE as demonstrated during performance testing	Minimum Mid-kiln Temperature Maximum Production Rate Maximum Hazardous Waste Feedrate Minimum Waste Feed Nozzle Atomizing Pressure

<sup>1</sup> All limits corrected to 7% O<sub>2</sub>, dry basis

<sup>2</sup> SVM standard expressed as pounds attributable to the hazardous waste per million Btu heat input from the hazardous waste

<sup>3</sup> LVM standard expressed as pounds attributable to the hazardous waste per million Btu heat input from the hazardous waste

<sup>4</sup> It is noted that the required DRE for dioxin-listed hazardous wastes (F020, F022, F023, F026, and F027 under 40 CFR 261.31) is 99.9999%. However, because Solite has not sought permitting under TSCA and is currently prohibited under its RCRA permit from receiving PCBs subject to the disposal requirements of 40 CFR.761, this standard does not currently apply. In the event Solite seeks and receives approval to receive such wastes, they will need to submit a revised NOC and a Title V permit amendment application to incorporate a compliance demonstration for dioxin-listed hazardous waste.